

## **Proposed Item for Biobased Designation**

The following biobased product information has been collected to support item designation by USDA for the Federal Biobased Product Preferred Procurement Program (FB4P). This summary reflects data available as of March 3, 2006 with additional Biobased Content Results and Performance Standards added on March 23, 2007.

### **Title: Laundry Products**

**Description:** Laundry detergents, bleach, stain removers, fabric softeners, etc. that do not leave skin-irritating residues and that clean effectively without the use of toxic chemicals. Agents are generally safe for all washable fabrics.

**Manufacturers Identified:** 17 manufacturers producing Laundry Products have been identified through internet searches, manufacturer's directories, trade associations, and company submissions.

**Industry Associations Investigated:** The following industry associations have been investigated for member companies producing Laundry Products:

- Biobased Manufacturers Association
- United Soybean Board
- Soap & Detergent Association
- Coin Laundry Association
- Cleaners and Laundry Association
- Drycleaners & Laundry Association
- Multi-Housing Laundry Association
- Nat'l Assoc of Institutional Laundry Managers

**Commercially Available Products Identified:** Of the manufacturers identified, 45 Laundry Products are commercially available on the market.

**Product Information Collected:** Specific product information including company contact, intended use, biobased content, and performance characteristics have been collected on 4 Laundry Products.

**Industry Performance Standards:** Product information submitted by biobased manufacturers indicate that have typically been tested to the following industry standards:

- Boeing Specification #D6-7127 Cleaning Interiors of Commercial Transport Aircraft
- American Home Appliance Manufacturers #HLD-1-1992 Clothes Dryers
- American Home Appliance Manufacturers #HLW-1-2006 Clothes Washers

**Samples Tested for Biobased Content:** 6 samples of Laundry Products have been submitted to independent laboratories for biobased content testing as specified by ASTM standard D6866-04.

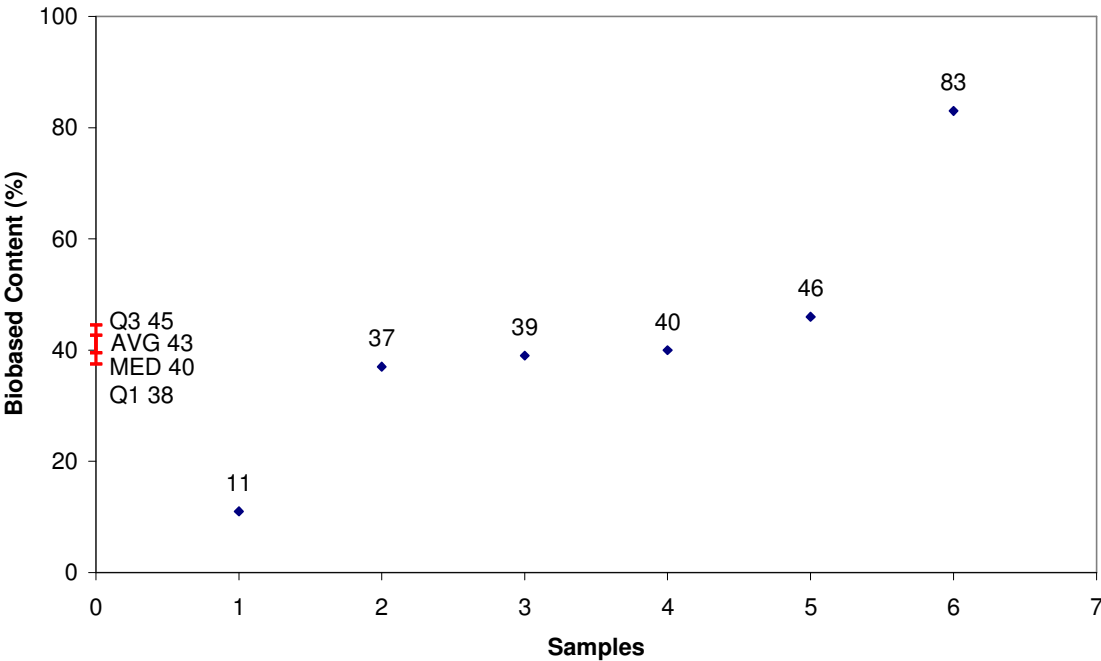
**Biobased Content Data:** Results from biobased content testing of Laundry Products indicate a range of content percentages from 11% minimum to 83% maximum biobased content as defined by ASTM D 6866-04. A detailed distribution of biobased content levels is included as Appendix A.

**Products Submitted for BEES Analysis:** Life-cycle cost and environmental effect data for 1 Laundry Products have been submitted to NIST for BEES analysis.

**BEES Analysis:** The life-cycle costs of the submitted Laundry Products range from \$84.54 minimum to \$84.54 maximum per usage unit. The environmental scores range from 0.1362 minimum to 0.1362 maximum. A detailed summary of the BEES results is included as Appendix B.

Appendix A - Biobased Content Data

Laundry Products

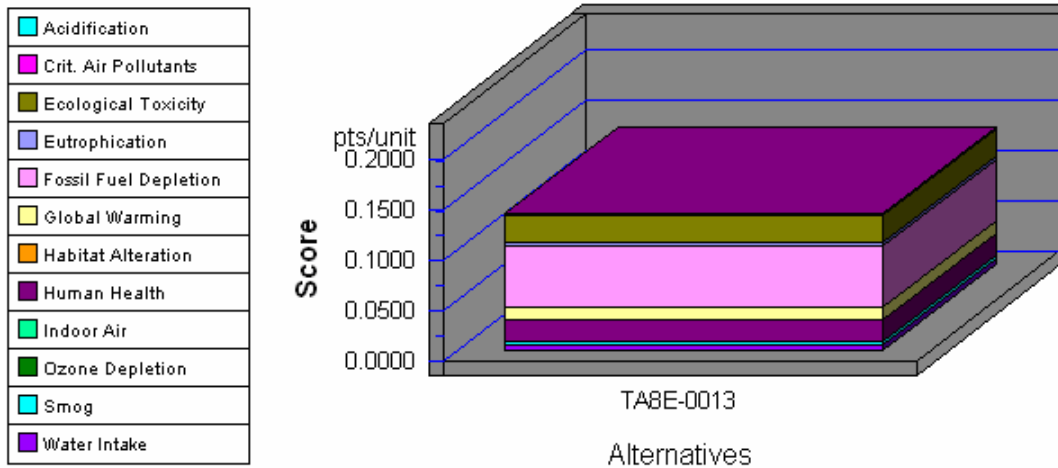


	Manufacturers Identified	Products Identified	C14	BEES
1	YJ3R	YJ3R-0013	11	
2	YJ3R	YJ3R-0002	37	
3	YJ3R	YJ3R-0005	39	
4	C9PX	C9PX-0011	40	
5	TA8E	TA8E-0013	46	yes
6	ULHI	ULHI-0016	83	

## Appendix B - BEES Analysis Results

Functional Unit: Washing 1,000 loads of laundry

### Environmental Performance

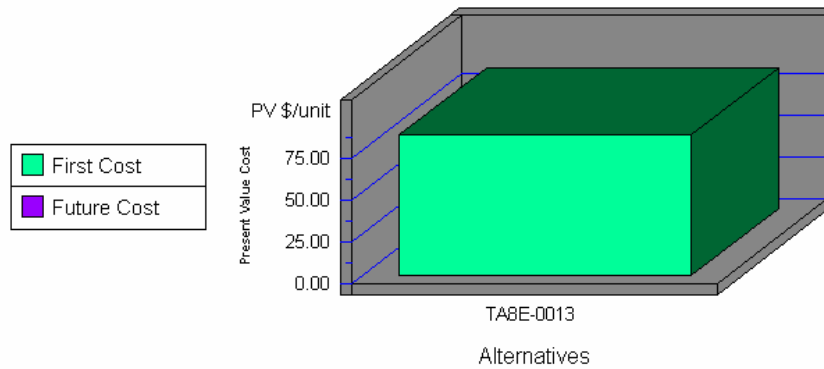


**Note: Lower values are better**

Category	T8E-0013
Acidification--5%	0.0000
Crit. Air Pollutants--6%	0.0012
Ecolog. Toxicity--11%	0.0269
Eutrophication--5%	0.0032
Fossil Fuel Depl.--5%	0.0609
Global Warming--16%	0.0119
Habitat Alteration--16%	0.0000
Human Health--11%	0.0216
Indoor Air--11%	0.0000
Ozone Depletion--5%	0.0000
Smog--6%	0.0043
Water Intake--3%	0.0062
<b>Sum</b>	<b>0.1362</b>

## Appendix B (continued)

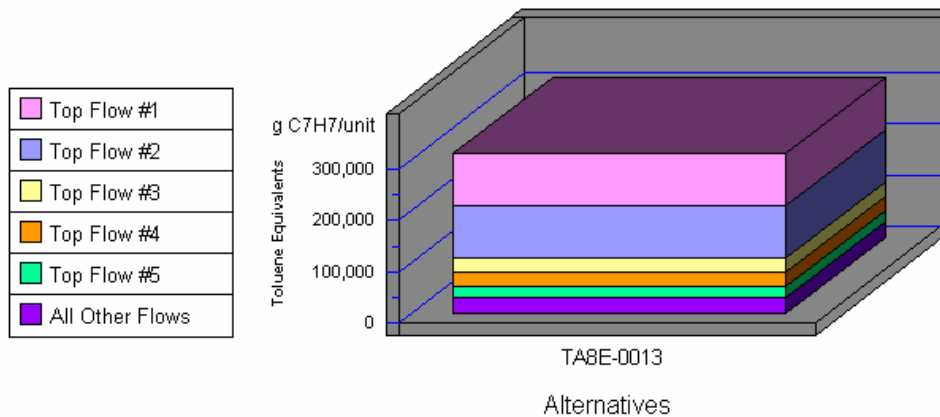
### Economic Performance



Category	TABE-0013
First Cost	84.54
Future Cost-- 3.9%	0.00
<b>Sum</b>	<b>84.54</b>

\*No significant/quantifiable durability differences are expected among competing alternatives. Therefore, future costs were not calculated.

### Human Health by Sorted Flows\*



**Note: Lower values are better**

Category	TABE-0013
Cancer--(w) Phenol (C6H5OH)	103,432.20
Cancer--(w) Arsenic (As3+, As5+	99,820.59
Cancer--(a) Ethylene Oxide (C2H	27,654.79
Cancer--(a) Dioxins (unspecifie	26,039.01
Cancer--(a) Arsenic (As)	23,362.87
All Others	31,602.15
<b>Sum</b>	<b>311,911.61</b>

\*Sorted by five topmost flows for worst-scoring product